

# IDEAS AT *Work*

COMPUTERS/HILLEL SEGAL

## 'Mace + Utilities' offers hard disk protection

In last week's column, I introduced you to a new program for IBM PCs and compatible computers, called Mace+Utilities, that claims to retrieve data from disks that have been accidentally reformatted. The claim was startling because it countered the conventional wisdom that disks are wiped clean when they are reformatted. This subject is important to businesses that use IBM PCs or compatible personal computers, because losing data due to inadvertent reformatting of the wrong disk is a common occurrence. It usually happens when people are formatting floppy disks for the first time. They use a command called "Format" that gets the disks ready for use. But it's easy to get confused and reformat the computer's internal hard disk — which contains all your valuable data — instead of the blank one.

As it turned out, if Mace+Utilities is installed and used on your computer after an accidental format command is executed, the program offers only limited retrieval.

However, the program contains three other important features. The first allows you to retrieve everything if it is installed before the error takes place, the second enables you to easily retrieve files that were inadvertently erased or deleted, and the third could speed up your hard disk's processing.

These features are so valuable that they are worth learning more about, so here are the details.

The first feature uses a key portion of the Mace+Utilities program that automatically stores a copy of the information that is normally destroyed by the format command on a secure portion of your hard disk. Thus, in the event of an accidental reformat of your disk, the data can be retrieved and the disk will contain everything it did before.

To make this happen, you must buy and install the Mace+Utilities before the error takes place. It's

operating system that's used on IBM PCs and compatible computers. When a file is "erased," it's not really erased from the disk at all — just the first letter of the name is deleted in the disk's file directory. This tells the computer that the space is available for another file, and the file name is simply omitted when the directory is listed.

Thus, if you want, you can retrieve the erased file if you act quickly — before a new file overwrites the space on the disk. While several programs are available to do this task, notably one called The Norton

Utilities which I discussed in past columns, the Mace+Utilities is one of the easiest to use. Indeed, while I recommended that only experienced programmers and computer experts attempt to utilize The Norton Utilities, the Mace+Utilities version can be used by untrained personnel.

The third important feature is a command in the Mace+Utilities called CONDENSE. Normally, when you create a new file or expand an existing one on your hard disk, the operating system uses the first available empty block on the disk, then the next, then the next. But if the available empty blocks are scattered in different parts of the disk, it doesn't take long for your disk to contain quite a hodgepodge of split-up files. This does two things: It slows down processing, and it makes reconstructing erased files very difficult.

The condense feature corrects this problem by rearranging the files on your disk so that each file is one complete unit, and that's what makes the Mace+Utilities easier to use than The Norton Utilities for retrieving erased files. As a bonus, your files are probably so split up that your computer's speed will improve dramatically after the condense feature is run. This is important when several computers share a single hard disk.

Despite this, there is one nega-



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available from the developer, Paul Mace, 206 Alicia Ave., Ashland, Ore. 97520, for \$69.95.

When this is done, every time you start up your computer, a new copy of this crucial information — which includes the file allocation tables and everything in your root directory — is automatically recopied to the last sectors of your disk. If an error takes place that loses or damages the disk's file allocation table or root directory, you can restore from the copy.

The second feature allows you to retrieve any file that's been accidentally erased or deleted, even if it's not in the root directory. It takes advantage of a little known feature of the PC-DOS/MS-DOS

tive aspect of the Mace+Utilities that you should be aware of — the documentation and operating instructions are very difficult to understand, even though the program itself is easy to run. The programmer made the mistake of writing the manual himself, and he assumed that his audience is composed mainly of programmers. As a result, unless you have an experienced operator in your office, or you engage a consultant to do it for you, you'll probably waste an hour or two getting it up and running.

Nonetheless, I'm impressed with the Mace+Utilities program and recommend it for every IBM PC or compatible computer installation that uses a hard disk.

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